

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
MICROBIOLOGY CLIENT SERVICES MANUAL - GENERAL INSTRUCTIONS**

ADDRESS

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SPECIMEN LABELING (See individual requirements under specific test.)

***NOTE: Specimen containers from the Utah Public Health Lab have an outdate printed on the label. Until January of 2002, water collection bottles outdate January 1 – two years from the red year date on the label. Example, the bottle is stamped 2000 467, it outdates 1/1/2002. Beginning in 2002, all expiration dates will be printed on the labels of our collection containers. Do not collect any sample in an outdated container. Call Technical Services for a new container.**

We do not supply blood collection tubes.

REPORTS

You must supply your correct Customer ID Code to receive test results.
See individual test for specific reporting criteria and methods.
If you are having problems with results turn around time, check your delivery method.
Some mail services and couriers are taking a week or more to get us your samples.

REQUISITIONS

Blank requisitions are available from Technical Services. See Appendix B.
All information must be provided. Incomplete requisitions cannot be processed.

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Section Chief: Dan Andrews

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Section Chief: Tom Sharpton

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Section Chief: Dan Andrews

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Section Chief: Tom Sharpton

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Section Chief: Sanwat Chaudhuri

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TEST	Botulism detection (<i>Clostridium botulinum</i>)
METHOD	Culture
AVAILABLE	Infant = all clients, Child / Adult = must be ordered by State Epidemiology
PATIENT PREP	For stool culture, patient must not have had barium gastro /enteric procedure in the past 3 days.
SPECIMEN	Feces = at least 10 grams; tissue = entire specimen; wound = swab
COLLECT IN	Sterile container
PROCESSING	No preservatives
TRANSPORT	Room temperature (best at 2 to 8 degrees C.)
TIME CRITICAL	Must be received in our lab as soon as possible
LABEL	Patient's full name or unique identification number, patient's age and collection date
REQUISITION	Microbiology Test Request
TEST COMPLETE	> one week after receipt in our lab
RESULTS	Organism present or absent
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	A toxin assay will be performed on all adult isolates
CONTACT	Bacteriology section

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TEST	Botulism toxin
METHOD	Mouse inoculation
AVAILABLE	Infant = all clients, Child / Adult = must be ordered by State Epidemiology
PATIENT PREP	For stool toxin, the patient must not have had a gastro / enteric barium procedure in the past 3 days.
SPECIMEN	Feces =10 gm; gastric secretions = 20 mL; serum = 10 mL; pure culture = fresh isolate subculture
COLLECT IN	Feces = sterile container; gastric = Port-A-Cult tube; serum = transport tube; culture = fresh anaerobic subculture
PROCESSING	Serum must be separated from whole blood before shipment
TRANSPORT	Feces, gastric and serum at 2 to 8 degrees C. (do not freeze); isolates must be transported in anaerobic transporter
TIME CRITICAL	Must be received in our lab as soon as possible
LABEL	Patient's full name or unique identification number, patient's age and collection date
REQUISITION	Microbiology Test Request
TEST COMPLETE	> five days from receipt in our lab
RESULTS	Toxin present or absent
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	When toxin is present, it will be typed
CONTACT	Bacteriology section

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TEST	<i>Bordetella pertussis</i> (pertussis); <i>Neisseria gonorrhoeae</i> (GC); <i>Neisseria meningitidis</i> (meningitis)
METHOD	Culture confirmation
AVAILABLE	All clients
PATIENT PREP	N/A
SPECIMEN	Pure culture of the organism
COLLECT IN	Appropriate media slant or plate (Regan Lowe, MTM, chocolate agar)
PROCESSING	Fresh subculture
TRANSPORT	Best in a CO ₂ pack at 32 to 35 degrees C.
TIME CRITICAL	To be viable outside a 35 degree CO ₂ pack, must be received in the lab within four hours of being removed from the incubator
LABEL	Patient's full name or unique identification number and date of subculture
REQUISITION	Microbiology Test Request
TEST COMPLETE	Three days from receipt in our lab
RESULTS	Presence or absence
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Susceptibility automatically performed on confirmed <i>Neisseria gonorrhea</i> isolates
CONTACT	Bacteriology section

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TEST	<i>E. coli</i> (shiga-toxin producing strains only); <i>Haemophilus influenza</i> (H. flu); <i>Legionella pneumophila</i> (Legionella); <i>Neisseria meningitidis</i> (meningitis); <i>Salmonella</i> , <i>Shigella</i>
METHOD	Serotyping (all organisms are confirmed before being typed)
AVAILABLE	All clients
PATIENT PREP	N/A
SPECIMEN	Pure culture of the organism
COLLECT IN	Nutrient media slant or plate that supports organism growth
PROCESSING	Fresh subculture
TRANSPORT	Room temperature
TIME CRITICAL	Organism must be received in our lab within 24 hours of subculture
LABEL	Patient's full name or unique identification number and date of subculture
REQUISITION	Microbiology Test Request
TEST COMPLETE	Variable (depends on organism)
RESULTS	Organism and serotype
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Requisition must include submitting laboratory's presumptive identification of the organism to be typed
CONTACT	Bacteriology section

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TEST	Stool for bacterial pathogens (<i>Salmonella</i> , <i>Shigella</i> , entero-hemorrhagic <i>E. coli</i> , <i>Campylobacter</i>)
METHOD	Culture
AVAILABLE	All clients
PATIENT PREP	If a patient has had a barium gastro/enteric procedure, wait at least 72 hrs before collecting a specimen
SPECIMEN	Feces (stool), rectal swab
COLLECT IN	Cary Blair Medium containers available from Technical Services
PROCESSING	Do not fill beyond red line (“Add specimen to this line”). Mix well with pink medium (instruction sheet enclosed with collection kit). Do not use the collection device past the expiration date printed on the label (i.e. EXP: 11/01).
TRANSPORT	Best at 2 to 8 degrees C.
TIME CRITICAL	Should be received in our lab within 24 hours of collection.
LABEL	Patient’s full name or unique identification number and collection date (space provided on the container label).
REQUISITION	Microbiology Test Request
TEST COMPLETE	Usually within 4 days of receipt
RESULTS	Pathogen isolated (positive) or “No Pathogens [detailed] recovered” (negative)
REPORTED	Mail, e-mail, or fax as established with provider
ADD INFO	Isolated pathogens will be serotyped (except <i>Campylobacter</i>)
CONTACT	Bacteriology section

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TEST	Susceptibilities (sensitivities): <i>Bordetella pertussis</i> (pertussis); <i>Neisseria gonorrhoeae</i> (GC); <i>Neisseria meningitidis</i> (meningitis)
METHOD	Disc diffusion (Kirby Bauer), E-test for <i>Neisseria meningitidis</i>
AVAILABLE	All clients
PATIENT PREP	N/A
SPECIMEN	Pure culture of the organism
COLLECT IN	Nutrient media slant or plate to support organism growth
PROCESSING	Fresh subculture
TRANSPORT	Room temperature
TIME CRITICAL	Organism must be received in our lab within 24 hours
LABEL	Patient's full name or unique identification number and date of subculture
REQUISITION	Microbiology Test Request
TEST COMPLETE	Three days from receipt in our lab
RESULTS	Each applicable antibiotic reported as susceptible, intermediate or resistant
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Susceptibility testing done automatically on all <i>Neisseria gonorrhoeae</i> isolates
CONTACT	Bacteriology section

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TEST	<i>E. coli</i> verotoxin producing strain (enterohemorrhagic <i>E. coli</i>)
METHOD	Culture isolation, EIA, verotoxin assay
AVAILABLE	Stool culture = local health departments only, referred isolate = all clients
PATIENT PREP	If a patient has had a barium gastro/enteric procedure, wait at least 72 hrs before collecting a specimen
SPECIMEN	Culture = feces; referred isolate = fresh subculture on nutrient agar plate or slant; sorbitol negative isolate; positive MAC enrichment broth from EHEC test
COLLECT IN	Feces = Cary Blair collection vial (FB) available from Technical Services EHEC broth = send tube Referred culture = nutrient agar plate or slant to support organism growth
PROCESSING	Feces = do not fill beyond red line (“Add specimen to this line”). Mix well with pink medium (instruction sheet enclosed with collection kit). Do not use the collection device past the expiration date printed on the label (i.e. EXP: 11/01). EHEC broth should be refrigerated until sent Referred culture = fresh isolate
TRANSPORT	Feces, EHEC broth = room temperature, may be on wet ice Referred culture = wet ice
TIME CRITICAL	Should be received in our lab within 24 hours of collection or subculture.
LABEL	Patient’s full name or unique identification number and date of collection or subculture
REQUISITION	Microbiology Test Request
TEST COMPLETE	Negatives = 72 hrs, positives = variable depending on confirmation testing required
RESULTS	Normal = <i>E. coli</i> , verotoxin positive strains will have the numbers and letters associated with their type (i.e. <i>E. coli</i> 0157-H7)
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Toxin positive isolates, not 0157-H7, are referred to CDC for typing. PFGE may be performed on isolates related to an outbreak investigation as determined by State Epidemiology
CONTACT	Bacteriology section

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TEST	Bacteria in foods that may be pathogenic for humans (outbreaks only)
METHOD	Culture
AVAILABLE	Scheduled through State Epidemiology
PATIENT PREP	N/A
SPECIMEN	Sample of suspect food (call Bacteriology section for details)
COLLECT IN	Clean, dry container
PROCESSING	Keep food at 2 to 8 degrees C. unless frozen, then keep it frozen
TRANSPORT	Transport at refrigerator or freezer temperature as appropriate
TIME CRITICAL	Transport immediately
LABEL	Client name, type of food, date collected, bacteria suspected
REQUISITION	Foodborne Investigation Examination Request
TEST COMPLETE	Variable, depends on organism
RESULTS	Presence or absence
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Food of the same batch or lot number as the suspect item must be submitted
CONTACT	Bacteriology section

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TEST	Arbovirus (chicken surveillance for WEE and SLE)
METHOD	Enzyme-linked Immunosorbent Assay (ELISA)
AVAILABLE	Mosquito Abatement
CHICKEN PREP	Use aseptic collection technique
SPECIMEN	At least 3 mL whole blood
COLLECT IN	Clot tube – do not use serum separator tube
PROCESSING	None, send whole blood
TRANSPORT	Wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 48 hrs of collection
LABEL	Barcode label, leg band number, flock location, collection date
REQUISITION	Arbovirus Testing
TEST COMPLETE	One week after receipt in our lab
RESULTS	Negative or positive for WEE and SLE
REPORTED	Mailed to Mosquito Abatement
ADD INFO	Slide confirmation testing is done on all positive ELISAs
CONTACT	Sharon Baldwin at 801-584-8400

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TEST	Hantavirus IgG and IgM (Sin Nombre Virus)
METHOD	Enzyme-linked Immunosorbent Assay (ELISA)
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	> 1 mL serum
COLLECT IN	Clot tube (5, 7 or 10 mL) Serum must be separated from the cells. Do not use serum separator tube unless you send an additional clot tube so the cells are available for testing.
PROCESSING	Send entire blood specimen (serum and cells in separate tubes – see above). If you do not have a centrifuge, send a clot tube and serum separator tube.
TRANSPORT	Room temperature, do not freeze
TIME CRITICAL	Specimen must be received in our lab within 7 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology Test Request
TEST COMPLETE	Test run within one week (2 weeks maximum) depending on number received
RESULTS	Negative, indeterminate or positive
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	All positive tests are sent to CDC for confirmation
CONTACT	Immunology section

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TEST	Hepatitis B surface antigen (HBsAg) and/or Hepatitis B surface antibody (HBsAb)
METHOD	Enzyme-linked Immunosorbent Assay (ELISA)
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	3 mL serum per test (7 or 10 mL whole blood)
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping)
PROCESSING	Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to the lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.
TRANSPORT	Room temperature, do not freeze
TIME CRITICAL	Must be received in our lab within 7 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology / Serology Test Request
TEST COMPLETE	Tests run Wednesdays and Fridays, reported same day (except positive antigen tests, HBsAg, require confirmation before reporting)
RESULTS	Negative or positive antigen or antibody as requested
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Testing for other Hepatitis types is not available in our lab
CONTACT	Immunology section

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TEST	HIV 1 (screen and confirmation)
METHOD	Screen = Enzyme-linked Immunosorbent Assay (ELISA), confirmation = Western Blot (WB)
AVAILABLE	All clients
PATIENT PREP	Use aseptic blood collection technique
SPECIMEN	2 mL serum, or transudate fluid swab in OraSure collection kit
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping). Transudate fluid = OraSure collection kit available from State Epidemiology.
PROCESSING	<p>Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to the lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.</p> <p>For transudate fluid follow instructions included in OraSure kit.</p>
TRANSPORT	Room temperature (do not freeze)
TIME CRITICAL	Must be received in our lab within 7 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology / Serology Test Request (EMS = HIV Serology)
TEST COMPLETE	ELISA tests are run Tuesdays and Thursdays. Negatives are reported the same day. Positives require confirmation testing (WB) that is performed once a week. WB results are available the day following the run.
RESULTS	Negative = non-reactive, positive = reactive with the WB results, indeterminate = new specimen should be submitted
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	HIV 2 is not currently available in our lab. All positive ELISAs are repeated. If there are conflicting results, a repeat specimen is requested. All specimens that are ELISA reactive on repeat are automatically confirmed by WB. OraSure cannot be done on patients under 13 years of age.
CONTACT	Immunology section

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TEST	Measles (Rubeola)
METHOD	IgM antibody by Enzyme Immuno-assay (EIA)
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	>1 mL serum / whole blood (only when no centrifuge is available)
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping)
PROCESSING	Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to our lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 5 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology Test Request
TEST COMPLETE	Seven days from receipt in our lab
RESULTS	Negative, positive or borderline positive
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Hemolysed or lipemic serum give false test results. A second specimen 2 to 3 weeks after the first is required for all borderline positive patients.
CONTACT	Immunology section

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TEST	Rubella
METHOD	IgM antibody by Indirect Fluorescent Antibody (IFA)
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	> 1 mL serum / whole blood (only when no centrifuge is available)
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping)
PROCESSING	Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to the lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.
TRANSPORT	Room temperature
TIME CRITICAL	Must be received within 5 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology Test Request
TEST COMPLETE	Seven days from receipt in our lab
RESULTS	IgM = < 1:10 or > 1:10 or > 1:20 (positives are diluted)
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Hemolysed or lipemic serum give false test results
CONTACT	Immunology section

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TEST	Syphilis Rapid Plasmin Reagin (RPR)
METHOD	Enzyme Immuno-assay (EIA)
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	>1 mL serum / whole blood
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping)
PROCESSING	Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to the lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 5 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology Test Request
TEST COMPLETE	Negative = 5 days from receipt in our lab Positive = one week (confirmation testing required)
RESULTS	Negative or reactive with dilution titer (i.e. reactive 1:4)
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Hemolysed or lipemic serum give false test results Positive specimens will be tested by FTA
CONTACT	Immunology section

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TEST	Syphilis Fluorescent Treponemal Antibody (FTA-DS)
METHOD	Direct fluorescent stain of antibody / antigen reaction
AVAILABLE	All clients. (on positive RPR samples only)
PATIENT PREP	Use aseptic collection technique
SPECIMEN	>1 mL serum / whole blood
COLLECT IN	Vacutainer tube (best results from serum separator tube that is spun before shipping)
PROCESSING	Allow blood to completely clot, spin at 3000g for 10 mins to remove lipids and bacterial contaminants. Aseptically separate serum into sterile tube. If using serum separator tube, follow manufacturer's instructions and spin tube before sending to the lab. You may submit whole blood if you do not have a centrifuge. Do not freeze whole blood.
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 48 hours of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Immunology Test Request
TEST COMPLETE	One week after RPR test is completed
RESULTS	Negative, minimal reactive or reactive
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Hemolysed or lipemic serum give false test results A minimal result = indeterminate, recommend the patient be retested
CONTACT	Immunology section

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TEST	<i>Bordetella pertussis</i> PCR (pertussis, whooping cough)
METHOD	Polymerase Chain Reaction (PCR)
AVAILABLE	All clients
PATIENT PREP	Best if collected following a coughing spasm
SPECIMEN	Nasopharyngeal swab, aspirate or washing
COLLECT IN	Cotton or dacron swab = sterile tube Fluids = sterile, screw capped container
PROCESSING	Do not place swabs in transport media, send dry or in saline Do not use calcium alginate swabs or charcoal based medium
TRANSPORT	Keep at 2 – 8 degrees C
TIME CRITICAL	Must be received in our lab within 48 hrs of collection
LABEL	Patient's full name or unique identification number, date of collection and "PCR pertussis"
REQUISITION	Microbiology Test Request
TEST COMPLETE	24 hrs after receipt in our lab
RESULTS	Positive or negative for <i>Bordetella pertussis</i>
REPORTED	Positive results are phoned to client, all results are mailed, e-mailed or faxed as established with the provider
ADD INFO	Throat and nasal swabs are unacceptable samples
CONTACT	Molecular Biology section

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TEST	Pulse Field Gel Electrophoresis (PFGE)
METHOD	Gel electrophoresis
AVAILABLE	Through the State Bureau of Epidemiology or by special arrangement with the Utah Public Health Lab's Molecular Biology section
PATIENT PREP	N/A
SPECIMEN	Pure culture of organism to be tested
COLLECT IN	Culture plate or slant
PROCESSING	Fresh subculture of the organism
TRANSPORT	Room temperature
TIME CRITICAL	Hand deliver or send overnight delivery
LABEL	Patient's full name or unique identification number, organism, subculture date, PFGE (for food isolates label with food source instead of patient name)
REQUISITION	Microbiology Test Request
TEST COMPLETE	3 working days
RESULTS	Molecular pattern
REPORTED	Mail, e-mail or fax as established with the provider
ADD INFO	Bacterial isolate must be earliest possible subculture. Each passage may alter the genetic pattern.
CONTACT	Molecular Biology section

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TEST	West Nile Virus St. Louis Encephalitis and Western Equine Encephalitis Virus (mosquito pools only)
METHOD	Polymerase Chain Reaction (PCR)
AVAILABLE	Epidemiology, Mosquito Abatement
PATIENT PREP	Use aseptic collection technique
SPECIMEN	Mosquitoes = 30 to 50 insects Bats, birds, etc. = at least 2 cubic millimeters brain tissue
COLLECT IN	Mosquitoes = vials from Molecular Biology. Brain tissue = sterile, leak proof container.
PROCESSING	Keep at 2 to 8 degrees C
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 48 hrs of collection
LABEL	Unique identification number, source animal, collection date
REQUISITION	Molecular Biology
TEST COMPLETE	24 hrs after receipt in our lab
RESULTS	Virus present or absent
REPORTED	Mail, e-mail or fax as established with the provider
ADD INFO	All positive specimens are forwarded to CDC. Specimens must arrive in the lab on a working week day. Specimens arriving on Friday must arrive before 2 p. m.
CONTACT	Molecular Biology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Acid fast bacillus stain (AFB smear)
METHOD	Auramine-O (fluorescent), confirmatory = Kinyoun cold acid fast stain
AVAILABLE	All clients
PATIENT PREP	Sputum = collect early morning specimen from deep, productive cough. (have patient rinse mouth with water just prior to collection) Sterile body sites, use sterile collection technique Urine = collect with aseptic culture technique
SPECIMEN	All specimens submitted for culture will have a direct stain performed (except blood). Material submitted on clean, glass slides thinly smeared and air dried will be accepted for staining.
COLLECT IN	Blood = yellow or green top vacutainer tube Bronchial washing, lavage, sputum = sterile 50 mL screw cap conical tube (available from Tech Services) Bronchial brush, CSF, body fluids, feces, tissue, urine = sterile container
PROCESSING	Avoid tap water on any instrument used in a procedure as it may contain AFB. Submit tissue in sterile saline.
TRANSPORT	Room temperature. Glass slides must be sent in such a manner as to prevent breakage during transport.
TIME CRITICAL	Must be received in our lab within 5 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Microbiology Test Request
TEST COMPLETE	Within 24 hrs of receipt in our lab
RESULTS	Negative for acid fast bacilli or Positive with the number of acid fast bacilli per high power field
REPORTED	All positive results are phoned. Preliminary positive and negative reports are mailed, e-mailed or faxed as established with the provider
ADD INFO	All positive fluorescent smears are confirmed with a permanent staining method (Kinyoun)
CONTACT	TB section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Acid fast bacilli (AFB) culture and susceptibility
METHOD	Rapid, liquid culture; standard media culture
AVAILABLE	All clients
PATIENT PREP	Sputum = collect early morning specimen from deep, productive cough. (have patient rinse mouth with water just prior to collection) Sterile body sites, use aseptic collection technique Urine = collect with aseptic culture technique (clean catch)
SPECIMEN	Blood = 7 to 10 mL Bronchial washing, lavage = >5 mL, brush = send entire brush CSF = >5 mL, other body fluids >2 mL Feces, tissue = 1 gm Sputum = 5 to 10 mL early morning specimen Urine = entire first morning void
COLLECT IN	Blood = yellow or green top vacutainer tube Bronchial washing, lavage, sputum = sterile 50 mL screw cap conical tube (available from Technical Services) Bronchial brush, CSF, body fluids, feces, tissue, urine = sterile, leak proof container
PROCESSING	Avoid tap water on any instrument used in a procedure as it may contain AFB. Submit tissue in sterile saline.
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 5 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Microbiology Test Request
TEST COMPLETE	Negative = 7 weeks, Positive depends on organism (preliminary positive reports sent when AFB growth is detected)
RESULTS	No AFB isolated (negative) or Genus and species/complex (positive)
REPORTED	Mail, e-mail or fax as established with the provider
ADD INFO	Do not use any transport media. Leaking specimens will be rejected.. Susceptibility testing will be done on all <i>Mycobacterium tuberculosis</i> complex isolates.
CONTACT	TB section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Referred acid fast bacilli (AFB) identification and susceptibility
METHOD	DNA probes, standard biochemicals, high pressure liquid chromatography (HPLC)
AVAILABLE	All clients
PATIENT PREP	N/A
SPECIMEN	Pure culture AFB or Bactec bottle
COLLECT IN	Agar slant or tube, Bactec bottle, Midget bottle
PROCESSING	None
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 5 days of growth
LABEL	Patient's full name or unique identification number and submission date
REQUISITION	Microbiology Test Request
TEST COMPLETE	Variable depending on organism
RESULTS	Genus and species / complex of AFB isolated
REPORTED	Mail, e-mail or fax as established with the provider
ADD INFO	Isolate must be packaged to meet DOT dangerous goods regulations. Susceptibility testing will be performed on <i>Mycobacterium tuberculosis</i> complex isolates only.
CONTACT	TB section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Congenital hypothyroidism (CH); Galactosemia (GAL); Hemoglobin variants (Hb); Phenylketonuria (PKU)
METHOD	CH = Time Resolved Fluorometry (TRF); GAL = Fluometric; Hb = Isoelectric Focusing Electrophoresis (IEF); PKU = fluorescent ninhydrin
AVAILABLE	All clients
PATIENT PREP	Warm the heel or finger 3 – 5 mins with a warm, moist, soft cloth. Cleanse the skin with an alcohol prep. Wipe the skin dry with a sterile gauze pad.
SPECIMEN	Whole blood placed onto 4 filter paper circles
COLLECT IN	Special filter paper available from Technical Services only
PROCESSING	Dry filter paper blood spots on clean, dry, flat surface for at least 4 hrs
TRANSPORT	Dried spots may be mailed in the envelope from the collection kit
TIME CRITICAL	Specimen must be received in our lab within 1 week of collection
LABEL	Kits are pre-labeled with a unique identification number which is on the filter paper specimen.
REQUISITION	Utah Department of Health Newborn Screening: First Screen The specimen cannot be processed unless all the information requested on the form is provided.
TEST COMPLETE	Normal = 2 working days; Abnormal = requires confirmation testing with varying completion times
RESULTS	CH: Normal or Abnormal in $\mu\text{g/dL}$ GAL: Normal or Abnormal in Units/gHb Hb: Normal or Variant PKU: Normal or Abnormal in mg/dL
REPORTED	Mail, e-mail, or fax as established with client
ADD INFO	Do not apply a second drop of blood to any circle not completely filled. “First” specimens are to be collected within 24 hours of birth. “Second” specimens are to be collected 2 weeks after the first. GAL is heat sensitive and should be kept out of extreme heat. If the CH is abnormally low, a TSH will be done automatically.
CONTACT	Newborn Screening section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Diet monitoring (PKU)
METHOD	Fluorescent ninhydrin
AVAILABLE	Arranged with PCMC through Newborn Screening Program Coordinator
PATIENT PREP	Warm the heel or finger 3 – 5 mins with a warm, moist, soft cloth. Cleanse the skin with an alcohol prep. Wipe the skin dry with a sterile gauze pad.
SPECIMEN	Whole blood placed onto 4 filter paper circles
COLLECT IN	Special filter paper available from Technical Services only
PROCESSING	Dry filter paper blood spots on clean, dry, flat surface for at least 4 hrs
TRANSPORT	Dried spots may be mailed in the envelope from the collection kit
TIME CRITICAL	Specimens should be received as soon as possible for the benefit of the patient
LABEL	Kits are pre-labeled with a unique identification number which is on the filter paper specimen.
REQUISITION	Utah Department of Health Newborn Screening: PKU Diet Monitoring The specimen cannot be processed unless all the information requested on the form is provided.
TEST COMPLETE	Three working days after receipt in our lab
RESULTS	mg/dL
REPORTED	Mail, e-mail, or fax as established with client
ADD INFO	Do not apply a second drop of blood to any circle not completely filled.
CONTACT	Newborn Screening section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Cryptosporidium parvum</i> and <i>Giardia lamblia</i> (fecal parasites, O & P)
METHOD	Antigen detection by Enzyme-linked Immunosorbent Assay (ELISA)
AVAILABLE	Local health departments
PATIENT PREP	If a patient has had a barium gastro/enteric procedure, wait at least 72 hrs before collecting a specimen
SPECIMEN	Feces
COLLECT IN	FP vial containing 10% formalin available from Technical Services
PROCESSING	Add specimen to red fill line and mix well with preservative
TRANSPORT	Room temperature, may be refrigerated
TIME CRITICAL	Specimen must be received within 5 days of collection
LABEL	Patient's full name or unique identifier, date and time of collection
REQUISITION	Microbiology Test Request
TEST COMPLETE	One week following receipt in our laboratory
RESULTS	<i>Giardia</i> or <i>Cryptosporidium</i> detected [positive] or No <i>Giardia</i> or <i>Cryptosporidium</i> detected [negative]
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Do not use a collection container that has exceeded the expiration date printed on the tube.
CONTACT	Bacteriology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Chlamydia trachomatis</i> or <i>Neisseria gonorrhea</i> (GC) amplified
METHOD	Amplified antigen detection
AVAILABLE	All clients
PATIENT PREP	Clean prep urogenital area as for standard culture collection. Urine = standard clean catch procedure.
SPECIMEN	Urogenital = swab. Urine = 20 mL, first morning specimen.
COLLECT IN	Urogenital = special collection kit available from Technical Services. Urine = sterile, screw capped container.
PROCESSING	Keep urine at 2 to 8 degrees C
TRANSPORT	Swabs = room temperature. Urines = on wet ice.
TIME CRITICAL	Must be received in our lab within 48 hrs of collection (urines kept continuously at 2 to 8 degrees C may be received within 6 days).
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Tests done Tuesdays and Fridays. Results available after 4 p. m. on test day.
RESULTS	Negative, indeterminate or positive
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Client may order Chlamydia, GC, or both tests from the same swab or urine specimen
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Chlamydia trachomatis</i> or <i>Neisseria gonorrhea</i> (GC) non-amplified
METHOD	Genprobe
AVAILABLE	All clients
PATIENT PREP	Clean prep urogenital area as for standard culture collection
SPECIMEN	Urogenital or conjunctival swabs
COLLECT IN	Special collection kits available from Technical Services
PROCESSING	Follow kit instructions
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 7 days of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Tested daily, available same day after 4 p. m.
RESULTS	Negative or positive
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Client may order Chlamydia, GC, or both tests from the same swab. Do not use kit beyond expiration date printed on the tube.
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Colorado tick fever
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	Whole blood
COLLECT IN	Clot tube (5, 7 or 10 mL)
PROCESSING	Send entire tube
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 72 hrs of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	One week from receipt in our lab
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Cytomegalic virus (CMV)
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique, urine = clean catch
SPECIMEN	Bronchial alveolar lavage, buffy coat, urine
COLLECT IN	Sterile, leak proof container
PROCESSING	Keep at 2 to 8 degrees C
TRANSPORT	On wet ice
TIME CRITICAL	Must be received in our lab within 48 hrs of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Three days from culture set up in our lab
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Enteroviruses
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	Relevant to symptoms (CSF, feces, skin lesions, throat washings)
COLLECT IN	Sterile, leak proof container
PROCESSING	Keep specimen at 2 to 8 degrees C
TRANSPORT	On wet ice
TIME CRITICAL	Must be received in our lab within 72 hrs of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Two to four weeks
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Herpes simplex</i> virus (Herpes)
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	Lesion swab, vesicular fluid, or tissue biopsy
COLLECT IN	Commercial sterile swab collection kit, viral transport system, or sterile tissue biopsy container
PROCESSING	Refrigerate immediately after collection
TRANSPORT	On wet ice
TIME CRITICAL	Must be received in our lab within 72 hrs of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Negative = 7 days from receipt in lab Positive = <7 days (actual date of growth)
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Rabies (animal specimens only)
METHOD	Fluorescent antibody (FA)
AVAILABLE	Local health departments or animal control agencies only
PATIENT PREP	Animal must be euthanized
SPECIMEN	Bats = entire animal, other animals = head only
COLLECT IN	Leak proof container
PROCESSING	Keep at 2 to 8 degrees C
TRANSPORT	On wet ice
TIME CRITICAL	Must be received in our lab within 72 hrs
LABEL	Unique identification number, “rabies exam”, and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Next working day
RESULTS	Negative or positive for Rabies by FA
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Testing is not performed on rodents
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Respiratory Virus Screen (Adenovirus; Influenza A or B; Parainfluenza 1, 2 or 3; Respiratory Syncytial Virus [RSV])
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique
SPECIMEN	Nasopharyngeal swab (NP) or washing
COLLECT IN	Swab = viral transport media. Washing = sterile, leak proof container.
PROCESSING	Swab may be sent dry in collection tube
TRANSPORT	Room temperature
TIME CRITICAL	Must be received in our lab within 72 hrs of collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Three days after receipt in our lab
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Varicella zoster</i> (chicken pox, VZV)
METHOD	Cell culture
AVAILABLE	All clients
PATIENT PREP	Use aseptic collection technique, clean skin with isopropanol
SPECIMEN	Lesion swab or vesicle fluid
COLLECT IN	Sterile leak proof container, syringe with needle capped, or swab in viral transport media
PROCESSING	Keep at 2 to 8 degrees C
TRANSPORT	On wet ice
TIME CRITICAL	Must be received in our lab < 24 hrs after collection
LABEL	Patient's full name or unique identification number and collection date
REQUISITION	Virology Test Request
TEST COMPLETE	Negative = 15 days, positive = as soon as there is growth
RESULTS	Virus isolated or not isolated
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Cultures are not set up on weekends or holidays
CONTACT	Virology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Aerobic spore analysis in water (bacillus)
METHOD	Membrane filtration on a modified starch medium
AVAILABLE	Scheduled through Water Lab section chief
SOURCE PREP	Allow drinking water to run at least 5 mins before collection
SPECIMEN	>100 mL
COLLECT IN	Sterile Water Bacteriology bottle with preservative (available from Tech Services). Do not rinse bottle or pour preservative out.
PROCESSING	Keep cold
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 24 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Protozoan Filter & Bacillus Lab Request Form
TEST COMPLETE	4 to 5 days after receipt in our lab
RESULTS	Number of organisms per 100 mL and 1000 mL water
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Leave one inch headspace in bottle so contents can be mixed
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Total coliforms in drinking water
METHOD	Quantitray (Colilert), membrane filtration (MF) as back up method
AVAILABLE	All clients
SOURCE PREP	Let water run 3 – 5 mins before collection
SPECIMEN	>100 mL water
COLLECT IN	Sterile Water Bacteriology bottle with preservative (available from Technical Services). Do not rinse bottle or pour preservative out.
PROCESSING	Leave one inch headspace in bottle so contents can be mixed
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 30 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Public Water System
TEST COMPLETE	24 hrs after receipt in our lab
RESULTS	Negative or number of coliforms per 100 mL water
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Do not collect from a movable faucet, through faucet screens, or near aerators
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Coliforms in swimming pools and spas
METHOD	Quantitray and heterotropic plate count (HPC). Membrane filtration (MF) is used as a back-up procedure.
AVAILABLE	All clients
SAMPLE PREP	Use “scoop” technique. Do not collect near disinfectant input site.
SPECIMEN	> 100 mL water
COLLECT IN	Sterile Water Bacteriology bottle with preservative (available from Technical Services). Do not rinse bottle or pour preservative out.
PROCESSING	Leave one inch headspace in bottle so contents can be mixed
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 30 hrs of collection
LABEL	Sampling site, collector, date and time collected
REQUISITION	Public Water System
TEST COMPLETE	Quantitray = 24 hrs from receipt in our lab. HPC = 48 hrs from receipt in our lab.
RESULTS	Negative or number of coliforms per 100 mL water and number of heterotropic plate count organisms per 1 mL water
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	All samples will automatically have a HPC
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Coliforms for water quality
METHOD	Membrane filter (MF)
AVAILABLE	Through the Department of Environmental Quality (DEQ)
SAMPLE PREP	Use “scoop” technique
SPECIMEN	>100 mL water
COLLECT IN	Sterile Water Bacteriology bottle with preservative (available from Technical Services). Do not rinse bottle or pour preservative out.
PROCESSING	Leave one inch headspace in bottle so contents can be mixed
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 8 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Utah State Water Quality System
TEST COMPLETE	72 hrs after receipt in our lab
RESULTS	Total number or colonies (coliforms and/or enterococci) per 100 mL water
REPORTED	Computer data transfer to DEQ
ADD INFO	All positives are confirmed with biochemical tests
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Cryptosporidium parvum</i> and/or <i>Giardia lamblia</i> in water (first and every 20 th analysis)
METHOD	EPA method 1623
AVAILABLE	Scheduled with Organic Chemistry Section Chief
SOURCE PREP	Complete requisition center section by recording start and end time, meter reading, turbidity, temperature and pH
SPECIMEN	>20L water
COLLECT IN	Clean, dry jug
PROCESSING	Keep cold
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 24 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Protozoan Filter & Bacillus Lab Request Form
TEST COMPLETE	One week after receipt in our lab
RESULTS	Number of organisms per 10L water
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	<p>The initial run and every 20th run from a water source is collected in this manner for a matrix spike to determine if there is anything lethal to <i>Cryptosporidium</i> or <i>Giardia</i> that is naturally occurring in the water system.</p> <p>Call lab to arrange collection / delivery date so that personnel are available to perform testing</p>
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Cryptosporidium parvum</i> and/or <i>Giardia lamblia</i> in water (2 nd through 19 th analysis)
METHOD	EPA method 1623
AVAILABLE	Scheduled with Organic Chemistry Section Chief
SOURCE PREP	Complete requisition center section by recording start and end time, meter reading, turbidity, temperature and pH
SPECIMEN	10L water passed through filter
COLLECT IN	Gelman 1.0 µg filter (available from Technical Services)
PROCESSING	Empty all water from filter before transporting
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 24 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Protozoan Filter & Bacillus Lab Request Form
TEST COMPLETE	One week from receipt in our lab
RESULTS	Number of organisms per 10L water
REPORTED	Mail, e-mail or fax as established with provider
ADD INFO	Call lab to arrange collection / delivery date so that personnel are available to perform testing
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	<i>Enterococcus</i> for water quality
METHOD	Enterolert
AVAILABLE	Through the Department of Environmental Quality (DEQ)
SAMPLE PREP	Use “scoop” technique
SPECIMEN	>100 mL water
COLLECT IN	Sterile Water Bacteriology bottle with preservative (available from Technical Services). Do not rinse bottle or pour out preservative.
PROCESSING	Leave one inch headspace in bottle so contents can be mixed
TRANSPORT	On wet ice, do not freeze
TIME CRITICAL	Must be received in our lab within 8 hrs of collection
LABEL	Water system number, sample number, sampling site, collector, date and time collected
REQUISITION	Utah State Water Quality System
TEST COMPLETE	24 hrs after receipt in our lab
RESULTS	Number of <i>Enterococcus</i> per 100 mL water
REPORTED	Computer data transfer to DEQ
ADD INFO	If you want more than one test from the same water source, call for total volume needed
CONTACT	Water Microbiology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Legionella in water samples
METHOD	Filter concentration, bacteriologic culture, confirmation by direct fluorescence
AVAILABLE	Special arrangement with the Microbiology Bureau Director
PREPARATION	Best results are obtained by monitoring the building's hot water heater
SPECIMEN	One liter of water per site tested
COLLECT IN	Disposable plastic, liter bottle (available from Technical Services)
PROCESSING	Keep specimen at the same temperature it was when collected
TRANSPORT	DO NOT REFRIGERATE
TIME CRITICAL	Must be received by our lab the same day collected before noon
LABEL	Provider name, collection site, collection date, person collecting sample water system name
REQUISITION	Bacteriology (see sample in appendix A)
TEST COMPLETE	One week from receipt in our lab
RESULTS	Colony forming unites per liter
REPORTED	Mailed to provider
ADD INFO	Collect water from the bottom of a hot water heater
CONTACT	Bacteriology section

**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL - TESTS**

TEST	Microscopic Particulate Analysis (MPA)
METHOD	EPA – Consensus Method for Determining Ground Waters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis
AVAILABLE	Arranged through the Utah Department of Environmental Quality (DEQ) by appointment with the Utah Public Health Lab Water Microbiology section only
PREPARATION	Collect following heavy rain, snow melt, irrigation. Collect second sample late summer, during a drought, etc.
SPECIMEN	Filter through which 500 to 1000 gallons of water has passed over an 8 to 24 hour period
COLLECT IN	One µm nominal porosity filter (available from DEQ, call 801-538-6146)
PROCESSING	Place filter in its labeled, plastic bag and close the bag
TRANSPORT	On wet ice, do not freeze . Must be received in our lab by noon on a regular work day.
TIME CRITICAL	Must be received in our lab within 36 hours of the collection completion time
LABEL	Site, date and time collection completed, person collecting sample, water system name, number of gallons processed through the filter
REQUISITION	Microscopic Particulate Analysis
TEST COMPLETE	3 to 4 weeks
RESULTS	Relative Risk Factor (none, low, moderate, high)
REPORTED	Mailed directly to DEQ by reference lab
ADD INFO	Should filter plug before the 500 gallon minimum sample has gone through, note that information on the test request form
CONTACT	Water Microbiology

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COMPLETE TEST LIST - ALPHABETICAL

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**UTAH DEPARTMENT OF HEALTH – PUBLIC HEALTH LABORATORY
CLIENT SERVICES MANUAL – APPENDIX B
TEST REQUISITIONS**

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MICROBIOLOGY TEST REQUEST FORM Use for Bacteriology, TB, and Molecular Biology		FOR LABORATORY USE ONLY LAB#: _____ DATE STAMP: _____					
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486							
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.							
PATIENT INFORMATION: Patient Name (Last, First): _____ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; padding: 5px;">Patient ID #: _____</td> <td style="width: 25%; padding: 5px;">DATE OF BIRTH (mm/dd/yy) _____/_____/_____</td> <td style="width: 25%; padding: 5px;">AGE: _____</td> <td style="width: 17%; padding: 5px;">SEX: M F</td> </tr> </table>				Patient ID #: _____	DATE OF BIRTH (mm/dd/yy) _____/_____/_____	AGE: _____	SEX: M F
Patient ID #: _____	DATE OF BIRTH (mm/dd/yy) _____/_____/_____	AGE: _____	SEX: M F				
PROVIDER INFORMATION: Provider Code: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"> Physician: _____ Physician Phone: _____/_____/_____ </td> <td style="width: 30%; padding: 5px; vertical-align: top;"> SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____ </td> </tr> </table>		Physician: _____ Physician Phone: _____/_____/_____	SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____		
Physician: _____ Physician Phone: _____/_____/_____	SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____						
SPECIMEN SOURCE/SITE: <input type="checkbox"/> Blood <input type="checkbox"/> Sputum <input type="checkbox"/> Natural <input type="checkbox"/> Nebulized <input type="checkbox"/> Urine <input type="checkbox"/> CSF <input type="checkbox"/> Skin <input type="checkbox"/> Bronchial Wash <input type="checkbox"/> Tissue (specify): _____ <input type="checkbox"/> Fluid (specify): _____ <input type="checkbox"/> Feces <input type="checkbox"/> Soft or Liquid <input type="checkbox"/> Bloody <input type="checkbox"/> Immunocompromised <input type="checkbox"/> Travel (specify): _____ <input type="checkbox"/> Wound/Abscess <input type="checkbox"/> Throat <input type="checkbox"/> Swab (specify): _____ <input type="checkbox"/> Vaginal <input type="checkbox"/> Cervical <input type="checkbox"/> Lesion <input type="checkbox"/> Urethral <input type="checkbox"/> Environmental (specify): _____ <input type="checkbox"/> Other (specify): _____ _____		TEST ORDERED: <input type="checkbox"/> Bacterial ID <input type="checkbox"/> Bacterial Culture <input type="checkbox"/> Botulism Toxin and Culture <input type="checkbox"/> Legionella Culture <input type="checkbox"/> Giardia <input type="checkbox"/> Cryptosporidium <input type="checkbox"/> Mycobacterial ID (TB) <input type="checkbox"/> Mycobacterial Culture (TB) <input type="checkbox"/> PCR <input type="checkbox"/> Bordetella pertussis <input type="checkbox"/> Reference Collection (specify): _____ <input type="checkbox"/> Other (specify): _____ _____					
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; padding: 5px;"> SUBMITTING LAB FINDINGS (List pertinent information including presumptive ID) Presumptive ID: _____ _____ _____ </td> </tr> </table>		SUBMITTING LAB FINDINGS (List pertinent information including presumptive ID) Presumptive ID: _____ _____ _____			
SUBMITTING LAB FINDINGS (List pertinent information including presumptive ID) Presumptive ID: _____ _____ _____							

[illegible]

HIV SEROLOGY TEST REQUEST FORM		FOR LABORATORY USE ONLY LAB#: _____	
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486		DATE STAMP: _____	
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.			
PATIENT INFORMATION: Patient Name (Last, First): _____			
Patient ID #: _____	DATE OF BIRTH (mm/dd/yy) _____ / _____ / _____	AGE: _____	SEX: M F
PROVIDER INFORMATION: Provider Code: _____	Physician: _____ Physician Phone: _____		SPECIMEN COLLECTION DATE (MM/DD/YY) / /
SPECIMEN DATA: Risk Factors: <input type="checkbox"/> IV Drug Abuse (27) <input type="checkbox"/> Sexual (28) <input type="checkbox"/> Transfusion (29) <input type="checkbox"/> Work Related (30) <input type="checkbox"/> Drug Abuse Partner (37) <input type="checkbox"/> MSM (Bi sexual-Gay) (38) <input type="checkbox"/> MSM (IDU) (39)		<input type="checkbox"/> 1st Specimen (1) <input type="checkbox"/> 2nd Specimen (2)	
TEST ORDERED: <input type="checkbox"/> HIV Antibody (33) <input type="checkbox"/> Referred for Supplemental Testing (33, 34) <input type="checkbox"/> HIV (35) & HBsAb (14) (EMS Employment Screen)			

HIV SEROLOGY/ CHAIN OF CUSTODY TEST REQUEST FORM		FOR LABORATORY USE ONLY LAB#: _____					
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486		DATE STAMP: _____					
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.							
PATIENT INFORMATION: Patient Name (Last, First): _____ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%; padding: 5px;">Patient ID #:</td> <td style="width: 25%; padding: 5px;">DATE OF BIRTH (mm/dd/yy) ____/____/____</td> <td style="width: 25%; padding: 5px;">AGE: _____</td> <td style="width: 17%; padding: 5px;">SEX: M F</td> </tr> </table>				Patient ID #:	DATE OF BIRTH (mm/dd/yy) ____/____/____	AGE: _____	SEX: M F
Patient ID #:	DATE OF BIRTH (mm/dd/yy) ____/____/____	AGE: _____	SEX: M F				
PROVIDER INFORMATION: Provider Code: _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> Physician: _____ Physician Phone: _____ </td> <td style="width: 40%; padding: 5px;"> SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____ </td> </tr> </table>		Physician: _____ Physician Phone: _____	SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____		
Physician: _____ Physician Phone: _____	SPECIMEN COLLECTION DATE (MM/DD/YY) ____/____/____						
CHAIN OF CUSTODY INFORMATION: <div style="margin-left: 20px;"> <input type="checkbox"/> Information on Supplemental Chain of Custody Record. </div> <div style="margin-left: 40px;"> RECORD NUMBER: _____ </div> <div style="margin-left: 40px;"> Collected by: _____ </div> <div style="margin-left: 40px;"> Date Collected (mm/dd/yy): ____/____/____ </div> <div style="margin-left: 40px;"> Time of Collection: _____ </div> <div style="margin-left: 40px;"> Specimen Sealed by: _____ </div> <div style="margin-left: 40px;"> Date Sealed (mm/dd/yy): ____/____/____ </div> <div style="margin-left: 40px;"> Time Sealed: _____ </div> <div style="margin-left: 40px;"> Transport Container Sealed by: _____ </div> <div style="margin-left: 40px;"> Date Sealed (mm/dd/yy): ____/____/____ </div> <div style="margin-left: 40px;"> Time Sealed: _____ </div>							

IMMUNOLOGY/SEROLOGY TEST REQUEST		FOR LABORATORY USE ONLY LAB#: _____	
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486		DATE STAMP: _____	
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.			
PATIENT INFORMATION: Patient Name (Last, First): _____			
Patient ID #: _____	DATE OF BIRTH (mm/dd/yy) _____ / _____ / _____	AGE: _____	SEX: M F
PROVIDER INFORMATION: Provider Code: _____		SPECIMEN COLLECTION DATE (MM/DD/YY) _____ / _____ / _____	
		Physician: _____ Physician Phone: _____	
IMMUNOLOGY/SEROLOGY REQUEST: (Check any that apply): <u>Syphilis Serology</u> <input type="checkbox"/> RPR (1, 2) <input type="checkbox"/> 1st Specimen (1) <input type="checkbox"/> 2nd Specimen (2) <input type="checkbox"/> Previous Positive RPR (3) <input type="checkbox"/> Previous Positive FTA (11) <input type="checkbox"/> Contact (4) <input type="checkbox"/> Prenatal (8) <input type="checkbox"/> FTA-ABS (2, 4) <u>Miscellaneous Serology:</u> <input type="checkbox"/> HBsAg (antigen) (5) <input type="checkbox"/> HbsAb (antibody) (13, 14) <input type="checkbox"/> Hantavirus (Sin Nombre) (55) <input type="checkbox"/> Other* Specific Agent Suspected: _____ *(Please call the Immunology Laboratory at 584-8400 for special instruction and/or availability before ordering.) Date of Onset (mm/dd/yy): _____ / _____ / _____ <u>Specimen Information:</u> <input type="checkbox"/> Acute serum drawn on (mm/dd/yy): _____ / _____ / _____ <input type="checkbox"/> Convalescent serum drawn on (mm/dd/yy): _____ / _____ / _____			

Rabies Examination Request		FOR LABORATORY USE ONLY LAB#: _____	
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486		DATE STAMP: _____	
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.			
PATIENT INFORMATION: Patient Name (Last, First): _____			
Patient ID #: _____	DATE OF BIRTH (mm/dd/yy) _____ / _____ / _____	AGE: _____	SEX: M F
PROVIDER INFORMATION: Provider Code: _____	Physician: _____ Physician Phone: _____		SPECIMEN COLLECTION DATE (MM/DD/YY) _____ / _____ / _____
Patient Information: <input type="checkbox"/> Bitten DATE: (mm/dd/yy) _____ <input type="checkbox"/> Exposed _____ / _____ / _____ Site, Extent and Circumstances of Bite:		Vet Information: Address: _____ _____ Telephone: _____ Fax: _____	
		Animal Information: Species: _____	
		<input type="checkbox"/> Euthanized Date: (mm/dd/yy) _____	
		<input type="checkbox"/> Died _____ / _____ / _____	
		Owner's Name: _____	
		Address: _____	
		Telephone: _____	
		<input type="checkbox"/> Provoked Attack (1)	
		<input type="checkbox"/> Unprovoked Attack (2)	
		<input type="checkbox"/> Contact with Other Possible Rabid Animal (3)	
		<input type="checkbox"/> Rabies Immunization Current (4)	
DIRECTIONS FOR SUBMITTING SPECIMENS: Heads must be removed from any animal larger than a gopher. <u>DO NOT</u> send live animals with the exception of bats. (Container must be labeled "Live Bat"). Heads must be wrapped in newspaper, then placed in a plastic bag. If shipping is necessary, please put plastic bag containing head in a leakproof container packed on wet ice. <u>DO NOT</u> send by U.S. Mail except by Special Delivery.			

VIRUS CULTURE TEST REQUEST FORM							FOR LABORATORY USE ONLY LAB#: _____			
UTAH STATE PUBLIC HEALTH LABORATORY 46 NORTH MEDICAL DRIVE SALT LAKE CITY, UTAH 84113-1105 TELEPHONE: (801) 584-8400 FAX: (801) 584-8486							DATE STAMP: _____			
TESTING WILL NOT BE PERFORMED UNLESS SLIP IS COMPLETELY FILLED OUT. PLEASE PRINT CLEARLY FOR ACCURACY.										
PATIENT INFORMATION: Patient Name (Last, First): _____										
Patient ID #: _____			DATE OF BIRTH (mm/dd/yy) _____ / _____ / _____			AGE: _____		SEX: _____ M F		
PROVIDER INFORMATION: Provider Code: _____			Physician: _____ Physician Phone: _____				SPECIMEN COLLECTION DATE (MM/DD/YY) _____ / _____ / _____			
Specimen Data: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> CSF <input type="checkbox"/> Blood </div> <div> <input type="checkbox"/> Urine <input type="checkbox"/> Throat Wash <input type="checkbox"/> Sputum </div> <div> <input type="checkbox"/> Swab: _____ <input type="checkbox"/> Tissue: _____ <input type="checkbox"/> Other: _____ </div> </div>										
Virus Culture Testing: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Herpes simplex (1) <input type="checkbox"/> Cytomegalovirus (2) <input type="checkbox"/> Colorado Tick Fever (4) <input type="checkbox"/> Varicella - Zoster (11) <input type="checkbox"/> Influenza (15) </div> <div> <input type="checkbox"/> Virus Culture Screen (3) <input type="checkbox"/> Respiratory <input type="checkbox"/> Enteroviruses <input type="checkbox"/> Adenovirus <input type="checkbox"/> Other (Specify): _____ </div> </div>										
Epidemiological Data: Disease Suspected: _____ Date of Onset: _____										
LAB USE ONLY										
Cell Line										
Vero										
RMK										
MRC5										
Initials										
Cell Line	72hr	7 day	A	N	I-A	I-B	Para 1	Para 2	Para 3	RSV
RMK										
MRC5										
Plate										
Initials										

WATER BACTERIOLOGICAL ANALYSIS TEST REQUEST FORM UTAH STATE PUBLIC HEALTH LAB/ 46 N MEDICAL DR. SLC UT 84113-1105 (801) 584-8400 FAX (801) 584-8486 Revised 10/04/01 PLEASE COMPLETE THE FOLLOWING USING A BALL POINT PEN. PLEASE PRINT CLEARLY.			
WATER SYSTEM #:	SYSTEM NAME:	FOR LABORATORY USE ONLY: LAB#:	DATE/TIME STAMP: RECEIVED:
SAMPLING POINT DESCRIPTION:			ANALYZED:
COLLECTED BY: _____			
COLLECTION DATE:	COLLECTION TIME (24 HR CLOCK):	SAMPLE NOT ANALYZED/ SUBMIT NEW SAMPLE <input type="checkbox"/> A. SAMPLE NOT RECEIVED WITHIN ACCEPTABLE HOLDING TIME <input type="checkbox"/> B. NO DATE /TIME ON SAMPLE <input type="checkbox"/> C. SAMPLE LEAKED <input type="checkbox"/> D. IMPROPER OR INADEQUATE PRESERVATION <input type="checkbox"/> E. OTHER	
WHERE WAS THE SAMPLE COLLECTED FROM? <input type="checkbox"/> PUBLIC WATER SUPPLY <input type="checkbox"/> PRIVATE (WELL, SPRING, ETC) <input type="checkbox"/> SWIMMING POOL/SPA/HOT TUB <input type="checkbox"/> OTHER (REAGENT WATER, ETC)		CONTACT INFORMATION SAMPLE RECEIVING (LAB) (801) 584-8400 BILLING (LAB) (801) 584-8409 DRINKING WATER (DEQ) (801) 536-4200 POOL/ SPA/ HOT TUB (DOH) (801) 538-6753 RESULTS (LAB) (801) 584-8445	
SAMPLE TYPE: An unmarked sample is processed as "Routine". <input type="checkbox"/> 1. ROUTINE SAMPLE <input type="checkbox"/> 2. REPEAT SAMPLE FOR: Lab#: _____ Date: _____ <input type="checkbox"/> 3. INVESTIGATIVE (not included on official records)			
ADDRESS TO SEND REPORTS TO: NAME: ADDRESS: CITY: STATE/ZIP: PHONE: _____ FAX: _____		ADDRESS TO SEND BILLING TO (Write "SAME" if same as reports) NAME: ADDRESS: CITY: STATE/ZIP: PHONE: _____ FAX: _____	

WATER BACTERIOLOGICAL ANALYSIS TEST REQUEST FORM UTAH STATE PUBLIC HEALTH LAB/ 46 N MEDICAL DR. SLC UT 84113-1105 (801) 584-8400 FAX (801) 584-8486 Revised 10/04/01 PLEASE COMPLETE THE FOLLOWING USING A BALL POINT PEN. PLEASE PRINT CLEARLY.			
WATER SYSTEM #:	SYSTEM NAME:	FOR LABORATORY USE ONLY: LAB#:	DATE/TIME STAMP: RECEIVED:
SAMPLING POINT DESCRIPTION:			ANALYZED:
COLLECTED BY: _____			
COLLECTION DATE:	COLLECTION TIME (24 HR CLOCK):	SAMPLE NOT ANALYZED/ SUBMIT NEW SAMPLE <input type="checkbox"/> A. SAMPLE NOT RECEIVED WITHIN ACCEPTABLE HOLDING TIME <input type="checkbox"/> B. NO DATE /TIME ON SAMPLE <input type="checkbox"/> C. SAMPLE LEAKED <input type="checkbox"/> D. IMPROPER OR INADEQUATE PRESERVATION <input type="checkbox"/> E. OTHER	
WHERE WAS THE SAMPLE COLLECTED FROM? <input type="checkbox"/> PUBLIC WATER SUPPLY <input type="checkbox"/> PRIVATE (WELL, SPRING, ETC) <input type="checkbox"/> SWIMMING POOL/SPA/HOT TUB <input type="checkbox"/> OTHER (REAGENT WATER, ETC)		CONTACT INFORMATION SAMPLE RECEIVING (LAB) (801) 584-8400 BILLING (LAB) (801) 584-8409 DRINKING WATER (DEQ) (801) 536-4200 POOL/ SPA/ HOT TUB (DOH) (801) 538-6753 RESULTS (LAB) (801) 584-8445	
SAMPLE TYPE: An unmarked sample is processed as "Routine". <input type="checkbox"/> 1. ROUTINE SAMPLE <input type="checkbox"/> 2. REPEAT SAMPLE FOR: Lab#: _____ Date: _____ <input type="checkbox"/> 3. INVESTIGATIVE (not included on official records)			
ADDRESS TO SEND REPORTS TO: NAME: ADDRESS: CITY: STATE/ZIP: PHONE: _____ FAX: _____		ADDRESS TO SEND BILLING TO (Write "SAME" if same as reports) NAME: ADDRESS: CITY: STATE/ZIP: PHONE: _____ FAX: _____	

WATER BACTERIOLOGY SPECIAL INSTRUCTIONS

Pool/ Spa/ Hot tub samples will have a colilert test and a heterotrophic plate count performed on each sample. All other samples will only have a colilert test performed unless specified in “other”. The colilert test consists of coliform and *E. coli* analysis.

INSTRUCTIONS FOR COLLECTING WATER SAMPLES

1. Do not rinse bottle out or touch lip of bottle.
2. Use only approved containers.
3. Return sample to lab within 24 hrs of collection.
4. Collect sample by removing aerator from tap and letting water run for 2-3 min. Fill bottle to top of line.
5. If collecting sample from lake, pond, etc, submerge the bottle, forcing it forward with an even slow motion.
6. Select sampling point that will be representative.
7. Fill out test request form as completely as possible.

STATE OF UTAH COLIFORM REGULATIONS (DRINKING WATER ONLY)

For routine samples which are Total coliform positive:

1. System must collect the number of repeat samples indicated below for each total coliform positive sample. **YOU MUST INDICATE THE LAB NUMBER OF THE ORIGINAL SAMPLE ON EACH REPEAT SAMPLE FORM.**

Population	Number of Repeat samples
25 – 1,000	4
greater than 1,000	3

2. These repeat samples must be taken within 24 hrs from specific locations as follows:
 - a. within 5 service connections upstream
 - b. within 5 service connections downstream
 - c. at the original sample site
 - d. from any site mentioned above (if needed)
3. Additional samples are required during the next month. The number of additional samples are as follows:

Population	Normal routine	Additional
25 – 1,000	1	4
1,000 – 2,500	2	3
2,500 – 3,300	3	2
3,301 – 4,100	4	1
greater than 4,100	5 or more	none required

For REPEAT samples, which are total coliform positive, the following rules apply:

1. If either the original routine sample or any of the repeat samples are Fecal or *E.coli* positive, an acute violation has occurred and Public Notice within 72 hrs is required.
2. If both the original routine sample and all repeat samples are only Total coliform positive, a non-acute violation has occurred and Public Notice is required within 14 days.